

## Durham Research Online

---

### Deposited in DRO:

12 May 2016

### Version of attached file:

Accepted Version

### Peer-review status of attached file:

Peer-reviewed

### Citation for published item:

Gali, N. and Hughes, M. and Mallet, O. and Karam, A. (2016) 'Entrepreneurial orientation and firm performance in the context of upper echelon theory.', in CARMA 2016 : 1st International Conference on Advanced Research Methods and Analytics, July 6 - 7, 2016, Valencia, Spain. Valencia: Universitat Politècnica de València, p. 146.

### Further information on publisher's website:

<https://doi.org/10.4995/CARMA2016.2016.4355>

### Publisher's copyright statement:

The paper was originally published by CARMA 2016: 1st International Conference on Advanced Research Methods and Analytics.

### Additional information:

---

### Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in DRO
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full DRO policy](#) for further details.

## Entrepreneurial Orientation and Firm Performance in the Context of Upper Echelon Theory

---

### ***Abstract***

*Entrepreneurial Orientation (EO) is a firm-level phenomenon, which involves the firm's prospects to take risks, be proactive, and be innovative. The first phase of EO (late 1970's-early 1990's) was characterized by a conceptual development of EO, while the second phase (mid 1990's-2009) involved studying the relationship between EO and firm performance. The emphasis of research then shifted towards studying the 'black box of EO' in the third phase (2010-2015). However, most of the research assumes a positive EO-performance relationship without providing enough theoretical foundations of the way EO enhances performance. This is true regardless of the undercurrent of studies that persist to reveal mixed or insignificant results. This paper provides insights into the origins of EO and shows that EO is subject to factors at the managerial level. Through the theoretical lens of upper echelon theory, we argue for the importance of studying the managerial characteristics such as CEO greed and overconfidence in relationship to the EO-performance relationship. Only then, can the taken-for granted positive EO-firm performance relationship be challenged. We hypothesize that the relationship between each dimension of EO and firm performance is curvilinear and that board power and CEO characteristics (CEO greed and overconfidence) significantly moderate this relationship.*

**Keywords:** *EO; firm performance; CEO greed; CEO overconfidence; upper echelon theory*

---

## 1. Introduction

Many researchers have questioned the nature of the construct entrepreneurial orientation (EO). EO has predominantly been conceptualized as a firm-level behavior. Furthermore, EO is grounded in upper echelon theory in which it is a reflection of top management team (Covin & Miller, 2014). Authors such as Mintzberg (1973) and Khandwalla (1976) have reiterated the grounding of EO at the upper echelon theory. Thus, this indicates that the 'upper echelon' perspective is dominant in the literature on EO (Covin & Miller, 2014) and draws from Hambrick and Mason's (1984) observations that over time organizations become reflections of their top managers. The importance of the top manager in EO is evident in Lumpkin and Dess's (1996, p. 136) definition that EO is "the methods, practices, and decision-making styles managers use to act entrepreneurially". In accordance with this conceptualization, some researchers have begun questioning an organization's top management as a reflection of a firm's behavior in order to identify EO (Zhu & Chen, 2015). However, when studying the EO-performance relationship, there is an ignorance of top managers in EO research despite its upper echelons heritage. Thus, perhaps ironically, the literature mostly disregards the human agency at play. This is important to pursue since there is a gap in the literature regarding exploring the role of managerial characteristics in the EO-firm performance relationship. Thus, it is important to investigate the complex phenomenon or the 'black box' of EO keeping in mind the human agency at play. It is of novelty to do so since EO has been decontextualized as Zahra and Wright (2011) have indicated and it is important to raise the importance of the human agency context back into the EO literature.

Building on the works of Mintzberg (1973), Khandwalla (1976), and Miller and Friesen (1982), EO was defined by Miller (1983) (even though Miller (1983) did not frame it as EO) as the joint exhibition of risk taking, proactiveness, and innovativeness. In other words, Miller (1983) conceptualized EO as a single construct composed of these three dimensions. Risk taking involves taking bold decisions and actions by venturing into new or emerging markets or by borrowing heavily and being willing to tolerate the uncertainty that comes with such entrepreneurial actions (Rauch *et al.*, 2009). Proactiveness has been defined as an opportunity-seeking component of EO, which involves anticipating future demand (Rauch *et al.*, 2009). Innovativeness, which is believed to be a central component of EO because of its emphasis on novelty and exploring opportunities (Lumpkin & Dess, 1996), involves engaging in experimentation and creativity.

Miller (1983) stated that the variables of risk taking, proactiveness, and innovativeness covaried significantly with EO. In doing so, Miller (1983, p. 770) indicated that an entrepreneurial firm is one that "engages in product market innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovations, beating competitors to the punch". The Miller (1983) definition and characterization of EO as risk-

taking, proactiveness, and innovativeness became the dominant characterization and definition adopted in the literature. Thus, investigators following Miller's conceptualization of EO consider an entrepreneurially-oriented firm to be one that exhibits risk taking, proactiveness, and innovativeness as a sum total whereby the higher the exhibition of these three dimensions (driven by the actions of top managers), the higher the EO of the firm. However, Wales *et al.* (2011) indicated that EO is a much more complex 'multifaceted phenomenon' that pervades heterogeneously across organizational hierarchical levels. Wales *et al.* (2011) indicated that firm-level EO, as an organizational phenomenon, varies within a firm, and by extension may vary across levels of analysis within the firm.

Contrastingly, Lumpkin and Dess (1996) explicitly emphasized that EO is not characterized by a joint or single exhibition of all its dimensions, but rather that a firm can be considered entrepreneurial if it exhibits one or more of the dimensions of EO. For instance, an organization can be considered entrepreneurially-oriented when it engages in new venture creation whilst avoiding risks. Thus, in contrast to Miller (1983) and studies in his tradition, Lumpkin and Dess (1996) conceptualized EO as a multidimensional construct wherein each of the dimensions of EO have varying effects and should be studied independently and interdependently.

There is a wide variation in the literature with regards to defining and conceptualizing EO, a problem echoed by Covin and Wales (2012). There has been quite a thorough exploration of the concept of EO with researchers providing multiple definitions. However, there is a general consensus in the literature that EO is a complex construct in which an entrepreneurially oriented firm is likely to be more inclined to take risks, exhibit proactiveness, and be more innovative.

An issue that has received far less treatment is Lumpkin and Dess' (1996) belief that the dimensions that make up EO might vary independently and interdependently such that their performance effects might not be uniform (Hughes & Morgan, 2007). Interestingly, at the time of their work, Lumpkin and Dess (1996) argued that there existed an untested biased assumption in the literature that higher EO leads to higher firm performance levels. This sparked a wealth of research that sought to find empirical support for the relationship between EO and business performance, largely implicating a positive EO-performance relationship (Rauch *et al.*, 2009). The reason is that EO dimensions have been collapsed into one EO construct. However, when taking each EO dimension's effect on firm performance interesting findings might be revealed. Thus, we hypothesize that each of the EO dimensions has an inverted U shaped relationship with firm performance.

Even though the EO research initially focused on the managerial aspects (Khandwalla, 1976; Mintzberg, 1973) later research has taken a toll on focusing on EO as a firm-level disposition with disregard to the human agency. In that context, it is of relevance to

examine the effect of CEO characteristics (particularly dark CEO characteristics such as greed and overconfidence) on the EO-firm performance relationship. CEO overconfidence is defined as the “overestimation of one’s own abilities, performance, level of control, or chance of success” (Moore & Healy, 2008, p. 502). While CEO greed is defined as the “desire for and active pursuit of extraordinary material wealth” (Haynes *et al.*, 2014, p. 6). Haynes *et al.* (2015) indicated that the literature has predominantly focused on the positive side of entrepreneurial leadership neglecting the negative side of entrepreneurial leadership. However, the lines between bright and dark entrepreneurial leadership can become blurry. For instance, confidence is an important trait for managers to exploit opportunities, however taken to the extreme it can lead to be a dark characteristic (i.e. overconfidence). This can cause managers to be overly optimistic in their judgments and take extreme risks (Haynes *et al.*, 2015). Thus, managers are best to be moderately confident yet not overconfident to the extent that taking extreme risky endeavors might jeopardize the firm’s success. This reiterates the association of CEO characteristics with EO, which is grounded in the upper echelon of the firm. Thereby, in the study we hypothesize that CEO characteristics (such as greed and overconfidence) significantly moderate the EO-firm performance relationship.

## **2. Method**

To meet the study’s research objectives, a research site that consists of a sufficient number of firms facing, experiencing or pursuing an entrepreneurial imperative is needed, and one in which a sufficient amount of quantitative data can be acquired. It is also important to consider the context of the study (e.g. US or UK context). To this end, the US context is of relevance to EO since the US allows more opportunities for uncertainty and managerial discretion (latitude of action) (Finkelstein & Boyd, 1998). Furthermore, in the literature it has been shown that US firms exhibit higher levels of EO than those in other countries (Kemelgor, 2002). Data was collected from Wharton Research Data Services database (WRDS). Financial data was Compustat-North America, market data was collected from CRSP, board of directors data from Riskmetrics, Institutional Ownership from Thomson Reuters, and CEO data from Execucomp.

The companies included are from high Tech industries according to Kile and Phillips (2009). The sample consists of large (> 500 employees) publicly traded US companies from years 2000 until 2014. The choice of large firms is based on the fact that large firms face competitive pressure to strategically prioritise entrepreneurship and innovation in order to sustain and grow their wealth and to resist competition from others in the industry and new entrants (Zahra, 1991). Thus, the utilization of large firms is of relevance in the EO context. Lastly, it is likely to find more reliable information on large publicly-listed organizations than small private organizations since it is possible to obtain reliable data on large

organizations as the latter have reporting obligations and data that is accessible publicly as part of their public listing status (Miller & Le Breton-Miller, 2011).

For computation of the variables, the SAS (statistical analysis system) software was used. The data format is panel data (longitudinal data). Panel data analysis is appropriate in instances when there are multiple variables across multiple time periods, thus it controls for company heterogeneity. It also avoids common method bias, which is characteristic of survey studies, since it allows the collection of data from different sources (Rauch *et al.*, 2009). In order to control for any unobserved or unmeasured firm and industry effects that are constant throughout time, fixed-effect regression models would be utilized. As such the effect of the predictors and moderators on the outcome variable can be studied by controlling for any overlooked variables (Haynes *et al.*, 2014).

There is a recurring call in the EO literature to develop new measures of EO, however few researchers have answered this call (George & Marino, 2011; Lyon *et al.*, 2000), which is due to the complexity of developing such measures and the dominance of the Miller (1983)/Covin and Slevin (1989) scales (Covin & Wales, 2012). The Covin and Slevin EO scale (1989) has been widely used in the literature to study the EO-performance relationship (Rauch *et al.*, 2009). However, such a summated scale combines the three dimensions of EO into a single construct, which might disregard the independent impact of each dimension on firm performance (Hughes & Morgan, 2007; Lumpkin & Dess, 1996). This was postulated by Lumpkin and Dess (1996) who suggested that the different dimensions of EO might influence firm performance differently. This was later tested by Hughes and Morgan (2007) who showed that the different dimensions of EO do have different effects on firm performance and might be context specific. Thereby, a scale that combines the three dimensions into a single construct might generate misleading interpretations and cause researchers to consider that such an interaction does not exist when in reality it does (Kreiser *et al.*, 2002). The popularity of such a scale has discouraged researchers from developing new measures of EO (Covin & Lumpkin, 2011).

It is important to note that proxies have been shown to be problematic and might not actually measure the construct. Thus they need to be validated against content analysis of EO. Even though the proxies intended for use in this doctoral study have been outlined in past research, it is important to break from the assumption that these proxies are inherently or intuitively accurate to prevent the risk of measurement malaise and test for such proxies (Ketchen *et al.*, 2013). Content analysis using CATA is superior to human analysis of texts since it is more reliable and faster (Short *et al.*, 2010). Moreover, content analysis through CATA software demonstrates high test-retest reliability when covering the multiple texts along a longitudinal time frame (Short *et al.*, 2010). Researchers have indicated that if one was to compare CATA word counts and human coded analysis, then CATA method proved to be more accurate since human coded analysis was subject to error (Short *et al.*, 2010).

## **Entrepreneurial Orientation and Firm Performance: In the Context of Upper Echelon Theory**

Using CATA allows one to attain construct validity of the EO dimensions (Short *et al.*, 2010). In order to validate the proxies for EO, content analysis using CATA (Computer Aided Text Analysis) software will be run on a sub sample (50 firms) for three single years (2000, 2004, 2008) since the validation of proxies through content analysis does not require the utilization of the whole sample size and using three different time periods instead of one allows for better cross-validation. In conclusion, the research methodology selected for this doctoral study is purely quantitative as secondary data will be used in order to reflect proxies for each of the EO dimensions, CEO moderator variables (e.g. CEO greed and overconfidence and managerial discretion), board power moderator variable, and to obtain data on firm performance measures (e.g. Tobin's Q and Total shareholder return).

The following study is of significance since there is a gap in the literature regarding exploring the role of managerial characteristics in the EO-performance relationship. The literature has predominantly taken for granted the EO as advantage perspective by accepting positive effects of EO on firm performance. However, the EO as advantage perspective has been challenged by undercurrent of studies showing an alignment between EO and extreme CEO characteristics such as narcissism (Wales *et al.*, 2013) and overconfidence (Engelen *et al.*, 2015). Thus, the literature should take into account the role of the CEO (especially dark CEO characteristics) in the EO-firm performance relationship. Taking into account the human agency context when understanding EO might challenge the hegemony of EO as advantage view. That is, when the CEO is accounted for in the EO-firm performance relationship, interesting findings might be revealed.

## **References**

- Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship Theory and Practice*, 35(5), 855-872.
- Covin, J. G., & Miller, D. (2014). International entrepreneurial orientation: Conceptual considerations, research themes, measurement issues, and future Research directions. *Entrepreneurship Theory and Practice*, 38(1), 11-44.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Covin, J. G., & Wales, W. J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 36(4), 677-702.
- Engelen, A., Neumann, C., & Schwens, C. (2015). Of Course I Can: The Effect of CEO Overconfidence on Entrepreneurially Oriented Firms. *Entrepreneurship Theory and Practice*, 39(5), 1137-1160.

- Finkelstein, S., & Boyd, B. K. (1998). How much does the CEO matter? The role of managerial discretion in the setting of CEO compensation. *Academy of Management Journal*, 41(2), 179-199.
- George, B. A., & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship Theory and Practice*, 35(5), 989-1024.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-106.
- Haynes, K. T., Campbell, J., & Hitt, M. A. (2014). When more is not enough: executive greed and its influence on shareholder wealth. *Journal of Management*, 1-30. doi:10.1177/0149206314535444.
- Haynes, K. T., Hitt, M. A., & Campbell, J. T. (2015). The dark side of leadership: Towards a mid-range theory of hubris and greed in entrepreneurial contexts. *Journal of Management Studies*, 52(4), 479-505.
- Hughes, M., & Morgan, R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Industrial Marketing Management*, 36(5), 651-661.
- Ketchen, D. J., Ireland, R. D., & Baker, L. T. (2013). The use of archival proxies in strategic management studies: castles made of sand? *Organizational Research Methods*, 16(1), 32-42.
- Khandwalla, P. N. (1976). Some top management styles, their context and performance. *Organization and Administrative Sciences*, 7(4), 21-51.
- Kreiser, P., Marino, L., & Weaver, K. (2002). Assessing the psychometric properties of the entrepreneurial orientation scale: A multi-country analysis. *Entrepreneurship Theory and Practice*, 26(4), 71-95.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of Management Review*, 21(1), 135-172.
- Lyon, D., Lumpkin, G., & Dess, G. (2000). Enhancing entrepreneurial orientation research: Operationalizing and measuring a key strategic decision making process. *Management*, 26(5), 1055-1085.



# **Entrepreneurial Orientation and Firm Performance: In the Context of Upper Echelon Theory**

- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Miller, D., & Le Breton-Miller, I. (2011). Governance, social identity, and entrepreneurial orientation in closely held public companies. *Entrepreneurship Theory and Practice*, 35(5), 1051-1076.
- Mintzberg, H. (1973). Strategy-making in three modes. *California Management Review*, 16(2), 44-53.
- Moore, D. A., & Healy, P. J. (2008). The trouble with overconfidence. *Psychological Review*, 115(2), 502-517.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761-778.
- Short, J., Broberg, J., Coglisier, C., & Brigham, K. (2010). Construct validation using computer-aided text analysis (CATA): An illustration using entrepreneurial orientation. *Organizational Research Methods*, 13(2), 320-347.
- Wales, W., Monsen, E., & McKelvie, A. (2011). The organizational pervasiveness of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 35(5), 895-923.
- Wales, W. J., Patel, P. C., & Lumpkin, G. T. (2013). In pursuit of greatness: CEO narcissism, entrepreneurial orientation, and firm performance variance. *Journal of Management Studies*, 50(6), 1041-1069.
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of business venturing*, 6(4), 259-285.
- Zahra, S. A., & Wright, M. (2011). Entrepreneurship's next act. *The Academy of Management Perspectives*, 25(4), 67-83.
- Zhu, D. H., & Chen, G. (2015). CEO narcissism and the impact of prior board experience on corporate strategy. *Administrative Science Quarterly*, 60(1), 31-65.